

HANEUL LEE

Phone: (530) 979-6225 | Email: hnee@ucdavis.edu
Address: 2356 Academic Surge, Davis, California, USA

RESEARCH INTERESTS

Software Engineering, Machine Learning, High Performance Computing

EDUCATION

UNIVERSITY OF CALIFORNIA, DAVIS
Doctor of Philosophy in **Computer Science**

Davis, CA, USA
Expected Jun. 2029

KONKUK UNIVERSITY
Bachelor of Science in **Computer Engineering** (GPA: 4.17/4.5)

Chungju, Korea
Feb. 2018

PUBLICATIONS

A Study on Personalized Health Care Contents Recommendation Algorithm (Korean) Jul. 2017
Korea Society of Computer Information

- In this paper, we provide customized health information to users among the infinite information provided through the web services or mobile applications. To achieve this, we designed a customized health content recommendation algorithm, which is used by using group intelligence algorithms and the decision tree. The self-health checkup information from users of customized health recommendation material is utilized and it is customized on the URL information on the web.

RESEARCH EXPERIENCE

KONKUK UNIVERSITY
Student Researcher

Chungju, Korea
Oct. 2016 – Feb. 2018

- Conducted a machine learning study that predicts the risk of disease based on the user's health information
- Created dump data and used KNN algorithms, Naïve Bayesian and association rules to study which algorithms are most optimized and calculate the values of each algorithm for optimization
- Designed ACDT (Ant Colony Decision Tree), web crawler and page rank for analyzing and recommending personalized healthcare information based on collective intelligence algorithms and machine learning with python programming

RELEVANT WORK EXPERIENCE

KEPCO KNOWLEDGE, DATA & NETWORK (KDN) | *A leading electric power grid IT service provider*
Web System Developer & Engineer | *Information and Communications Technology (ICT) Center*

Naju, Korea

Jul. 2018 – Mar. 2022

- Responsible for a wide range of enterprise solution development, system maintenance, server configuration, troubleshooting, data management, system optimization, and documentation in compliance with the company's IT guideline and regulations
- Joined the firm as a technical intern (Jul-Sep2019); promoted to full-time employment (Oct2018-Mar2022), Associate Engineer
- **Enterprise System Development, Optimization & Data Migration**
 - Established the optimized system development and upgrade strategy in alignment with the organization's business objective, product priorities, allocated resources, given timeline, and KPI goals as part of integration support initiatives
 - Took part in data migration to match data integrity and standardize data sets amongst different systems; adjusted database name, column name, type, and size according to the data dictionary/version; led the data job, procedures, triggers
 - Diagnosed the current workflow within existing systems by identifying business issues, data problems/errors, & database redundancy; handled simulations on viable scenarios based on analysis on developer's metrics to attain effective solution
- **Server Maintenance, Configuration & Troubleshooting**
 - Played a pivotal role in server maintenance as a Database Engineer by resolving network problems and issues through trouble shooting based on daily automated processes; investigated variations, faults, and root causes of issues in the network
 - Acknowledged new government regulation change or update to reflect into the system configuration or feature development in a timely manner; rectified the system UI/added new calculation category in reflection of client feedback
 - Performed ongoing server operation, monitoring, testing, and maintenance according to the database specification and settings; reported network efficiency/security status by strictly adhering to the internal network maintenance guidelines
- **Project Management, Documentation & Risk Mitigation**
 - Handled end-to-end process of project management of web server system maintenance, development, implementation, and operation; liaised with system updates and administered contract management such as contract renewal and payment

- Managed system documentation by recording technical description, server specification, system framework, and server version information to streamline the workflow and convey consistent information across the teams internally/externally
- Took part in the security check twice a quarter to ensure system accountability, stability, and integrity; followed up on the action plan with internal reporting in case any system inconsistency or vulnerability is found to mitigate potential risk

KOREA INSTITUTE OF PATENT INFORMATION

Daejeon, Korea

IT Intern | Database Management Team

Jun 2018 – Jul 2018

- Involved in the database development project management to establish an integrated search engine system by containing global data sets toward Intellectual Property; supported the database development by applying registered patent data in Korea
- Collected, analyzed, and evaluated large patent data, and reviewed complex statistical information for system development, configuration, testing, and implementation in coordination with various technical developers, engineers, and project managers

KOREA POWER EXCHANGE (KPX)

Naju, Korea

IT Intern | IT Development Team

Apr 2018 – May 2018

- Took part in the general electrical system and network training to advance the practical/technical skills, including data transmission process, market price calculation methodology, power transmission network system operation across the country
- Conducted research industry trend and competitor study on new energy infrastructure, equipment, and power facilities, and organized industry information to conduct a presentation; wrote up meeting minutes and distributed internally for their review;

ACADEMIC SERVICE AND PRESENTATIONS

- Co-reviewer | **ICSE 2025** Research Track
- Co-reviewer | **PLDI 2024** Research Track
- Thesis Poster Presentations | **Korea Society of Computer Information Conference** | Jul 2017

TEACHING EXPERIENCE

- Teaching Assistant | ECS 140A Programming Languages | University of California, Davis | Spring 2024
- Teaching Assistant (Volunteer) | Computational Thinking (Scratch & Python) | Konkuk University | 1st Semester 2017
- Instructor (Volunteer) | Conducted Math and Science Lessons | PSH Child Center | Chungju, Korea | Apr 2014 – Nov 2015

ENGINEERING PROJECTS & TRAINING

- Information Security Engineer Training (800 Hours) | **Korea Information Technology Research Institute** | Aug 2017 – Jan 2018
- Student Researcher | **Machine Learning and Intelligence Algorithm** | Konkuk University | Oct 2016 – Feb 2018
- Student Developer & Planner | Undertook Application Planning to Develop an Android App <Doran Doran> and Published into the Google Play Store for Competition Participation with Team Members | Sep 2016 – Oct 2016
- Mobile Professional Training Course | **Android Application Development using Java** | SKT Academy | Jul 2016 – Sep 2016

SKILLS

- Languages | Korean (Native speaker), English (Full professional fluency)
- Programming Languages | **Python, Java (Web and Android Application), JavaScript, Oracle, MSSQL, MySQL, HTML, CSS**
- Tools | **Docker, Visual Studio code, Eclipse, Android Studio, Oracle SQL Developer, Toad, SQL Server Management Studio, MySQL Workbench, eXERD(Database Modeling)**